Planning for Pedestrian Safety:

THE NEW ORLEANS PEDESTRIAN SAFETY ACTION PLAN

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Louisiana Public Health Institute

Why pedestrian safety?

Nationwide (in 2013):

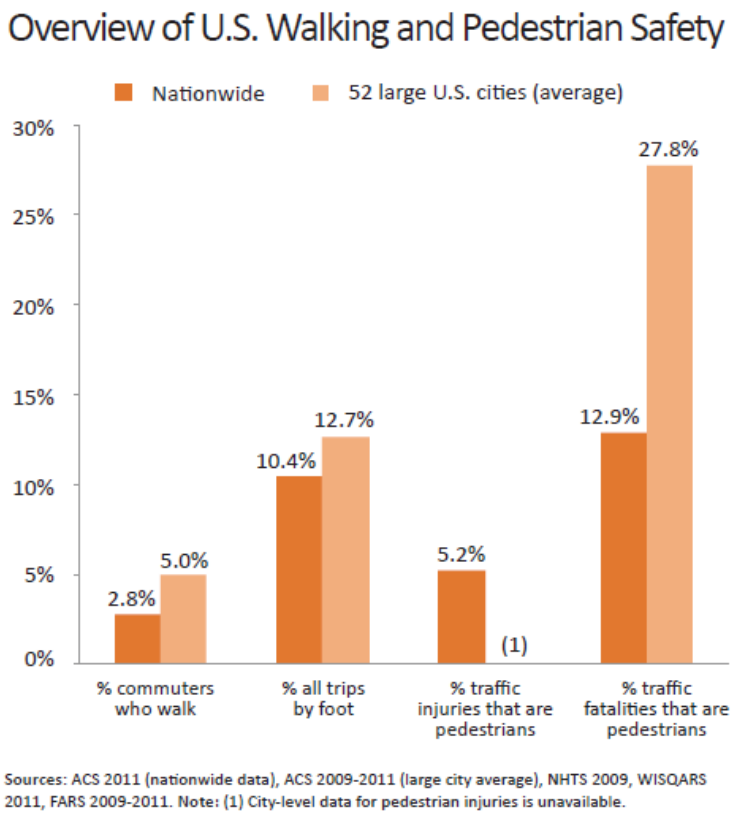
- 4,735 pedestrians killed in traffic crashes
- 14 % of all traffic fatalities in motor vehicle traffic crashes were pedestrians
- 69% of the pedestrians killed in traffic crashes were males
- More pedestrian traffic fatalities occurred in urban areas (73%) than rural areas (27%)

Source: National Center for Statistics and Analysis. (2015, February). Pedestrians: 2013 data. (Traffic Safety Facts. Report No. DOT HS 812 124). Washington, DC: National Highway Traffic Safety Administration

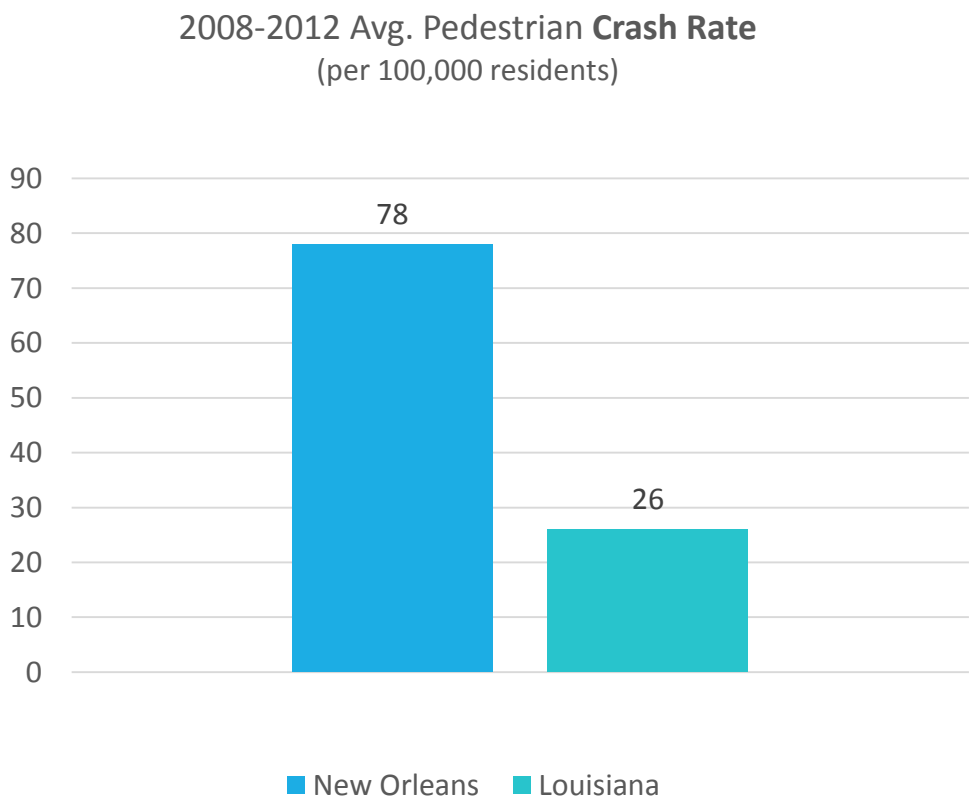
Pedestrian safety trends in the US

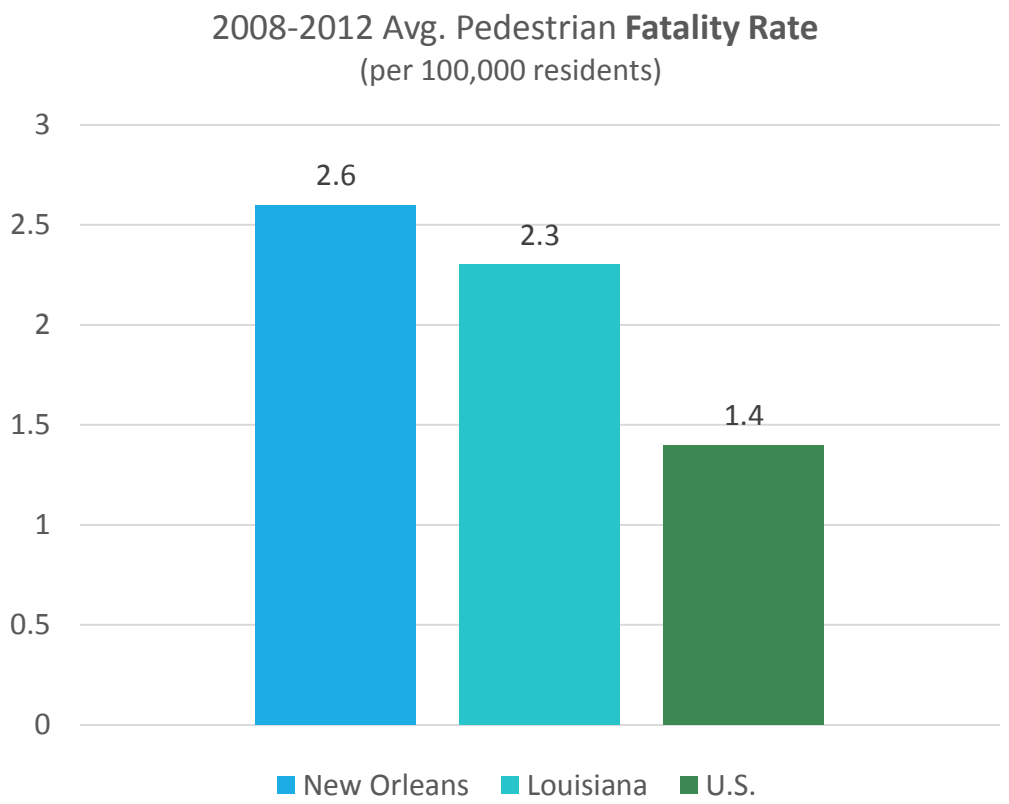
Absolute numbers of pedestrian fatalities have been decreasing, but their share of all traffic fatalities has increased.

- Alliance for Biking and Walking



How New Orleans compares...





Sources: Louisiana Crash Data Reports, Louisiana Highway Safety Research Group, http://datareports.lsu.edu/ and NHTSA's National Center for Statistics and Analysis

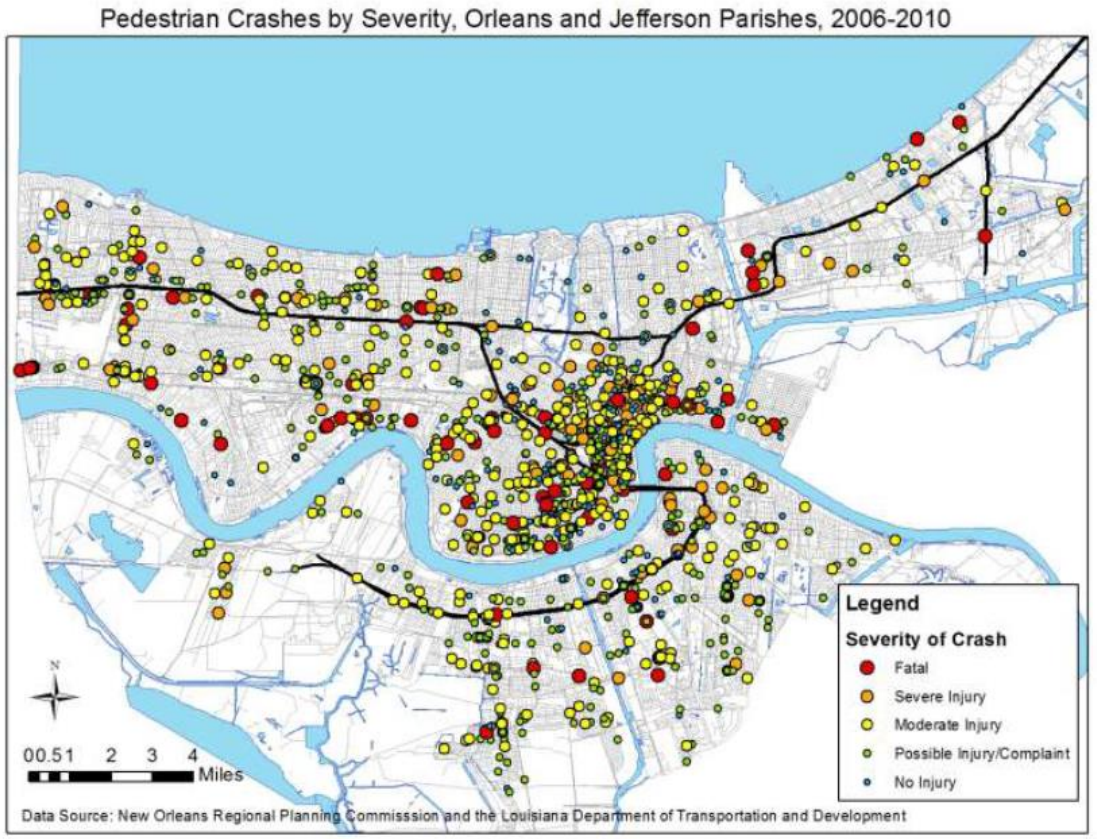
Previous pedestrian safety efforts

New Orleans Regional Pedestrian and Bicycle Crash Reports (2006-2012) (NORPC)

New Orleans Pedestrian and Bicycle Count Reports (2011-2012) (NORPC)

Louisiana Crash Data Reports (LaDOTD)

New Orleans Regional Transportation Safety Plan – Pedestrian and Bicycle Emphasis Area (began 2012)



Pedestrians are increasing

The number of pedestrians increased 66.8% between 2010 and 2013 at observation locations

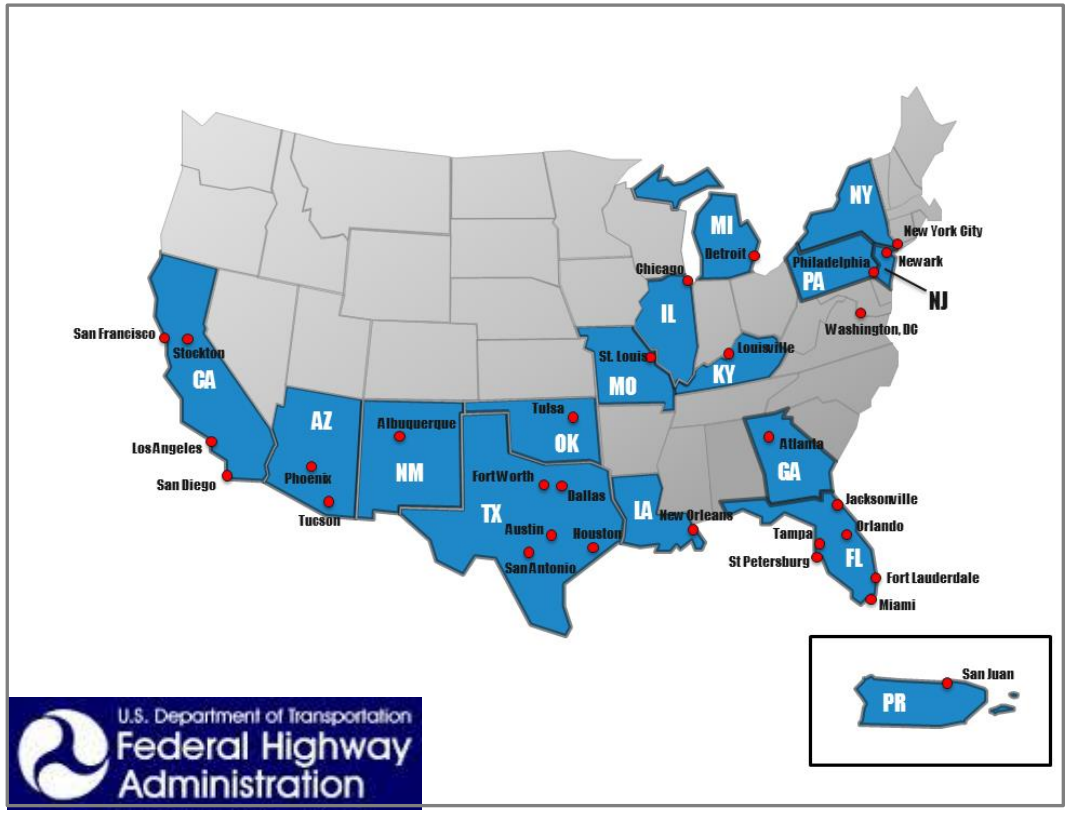
From 2009 to 2012, New Orleans visitors increased from 7.5 million to 9 million – up 20% [1]

1) New Orleans Convention & Visitors Bureau, New Orleans Tourism Industry Recovery Milestones, August 2013.)

	Observed Volume (8-hour period)		Absolute Change	Percent Change
Count Site	**2010**	**2013**	**2010-2013**	**2010-2013**
Harrison Ave	124	285	161	129.8%
Gentilly Blvd	126	121	-5	-4.0%
Esplanade Ave	230	573	343	149.1%
Royal St	324	376	52	16.0%
St. Claude Ave	230	325	95	41.3%
Magazine St (Uptown)	330	338	8	2.4%
Camp St (Gateway)	144	199	55	38.2%
Magazine St (Gateway)	159	334	175	110.1%
Decatur St	1313	3053	1740	132.5%
Simon Bolivar Ave	608	692	84	13.8%
Carondelet St (Gateway)	81	140	59	72.8%
St. Charles Ave	550	603	53	9.6%
TOTAL	**4219**	**7039**	**2820**	**66.8%**

Source: New Orleans 2013 Pedestrian and Bicycle Count Report (NORPC)

Pedestrian Safety Focus Cities Initiative

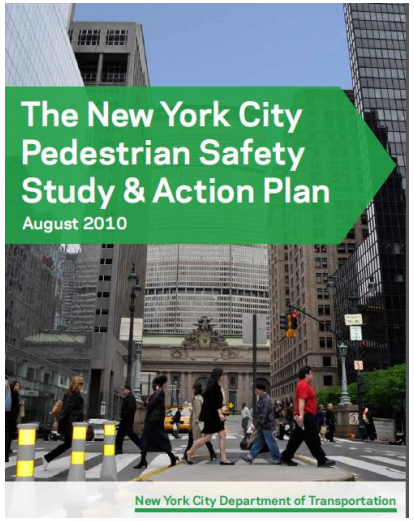


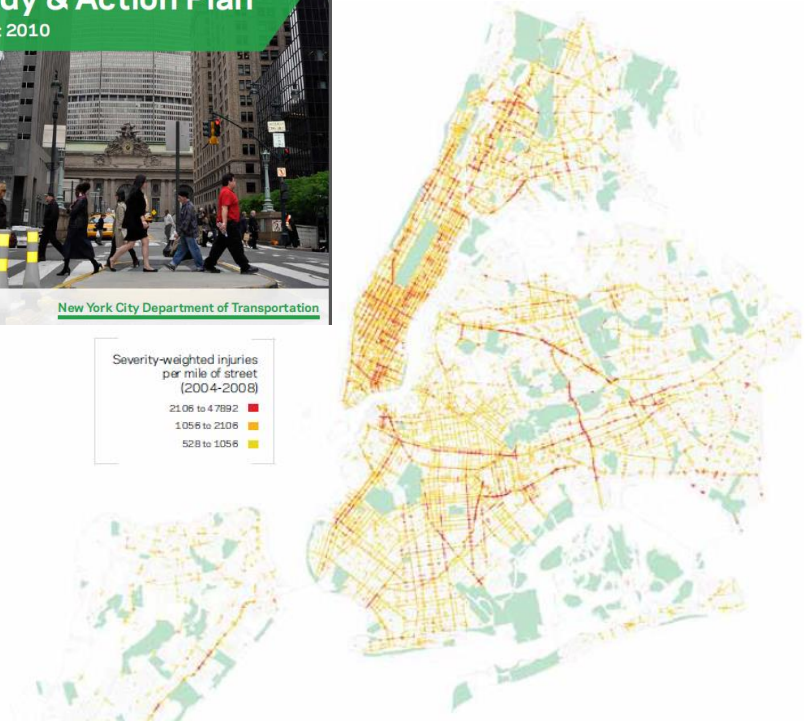
Identified cities with higher-than average rates of pedestrian crashes and fatalities

City of New Orleans and Louisiana designated in 2012

- One of 16 states
- Monthly peer exchange
- Bi-monthly webinars
- Encouraged development of Pedestrian Safety Action Plans (PSAPs)
- New Orleans team included staff from DPW, RPC, and LPHI

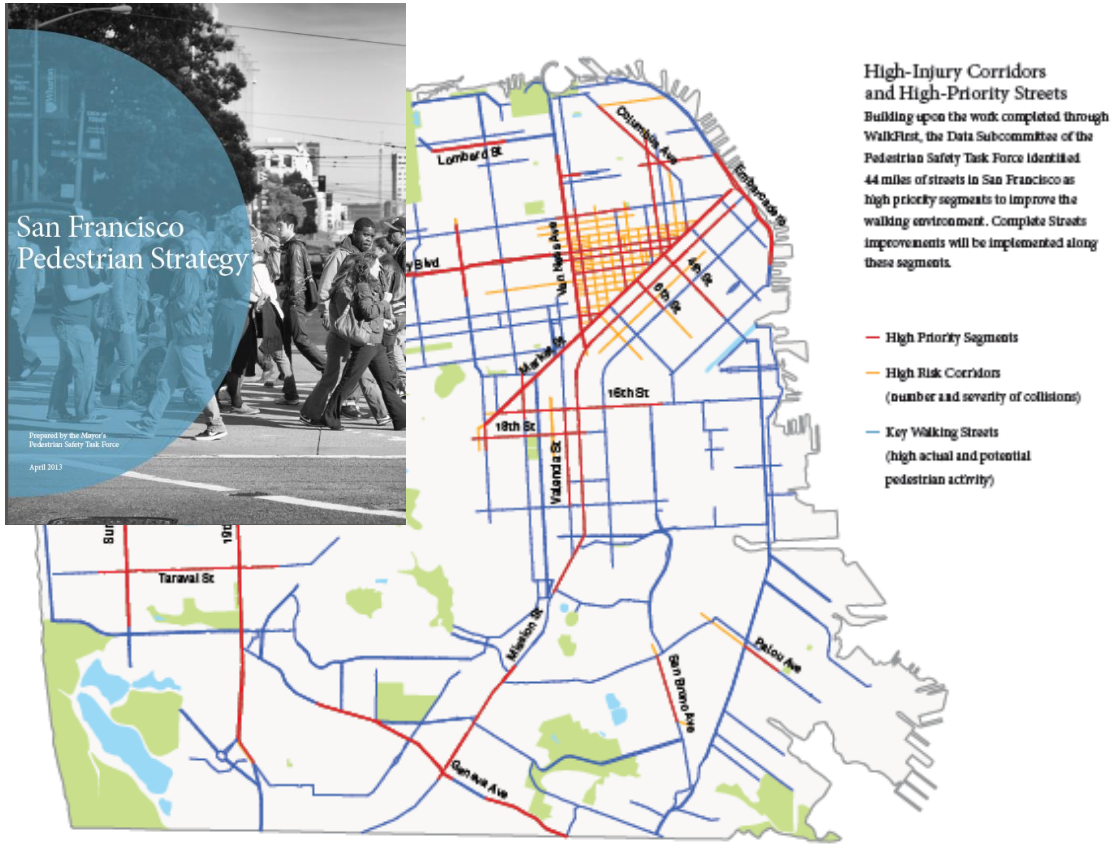
Other recent initiatives in other cities: NYC





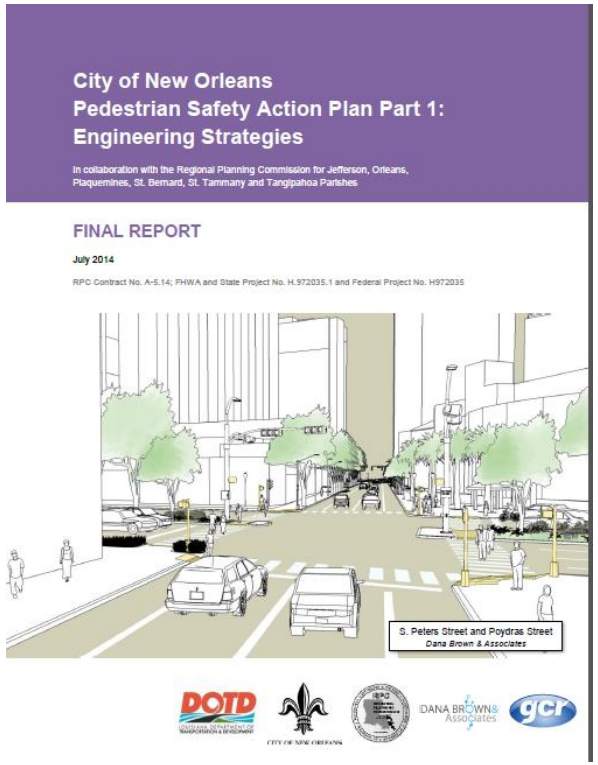
- Examined 8 years of crash data
- Focused on pedestrians killed or severely injured (KSI)
- Examined who, where, when, and how for 7,000 crashes
- Resulted in specific education, enforcement, and engineering strategies

Other recent initiatives in other cities: San Francisco



- Examined 10 years of pedestrian crash data
- Examined underlying causes behind crashes
- Identified “High Priority Segments,” “High Risk Corridors,” and “Key Walking Streets”
- Strategies focused on reducing speed, improving yielding compliance, and reducing incidences involving left-turning vehicles

New Orleans' pedestrian safety approach



- New Orleans Regional Planning Commission (RPC) designated $50,000
- GCR, Inc. hired to conduct analyses and provide recommendations
- Examined 5 years of pedestrian crash data (2008-2012)
- Focus on engineering strategies

Crash analysis methodology

Identify:

1. **Locations**, including intersections and multi-block corridors, where crashes resulting in severe injuries and fatalities (KSI's) have frequently occurred from 2008-2012
2. **Who** was involved in the crashes
3. **Common factors** that engineering countermeasures would address
4. **Weighted analysis** of crashes based on severity

Code/Severity	Weight
A/Fatality	36
B/Severe injury	36
C/Non-severe injury	4
D/Possible injury	1
E/No injury	0.04

New Orleans Pedestrian Crash Analysis

Legend

- 1 KSI (126)
- 2 KSIs (15)
- 3 KSIs (1)
- All Others (1289)

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

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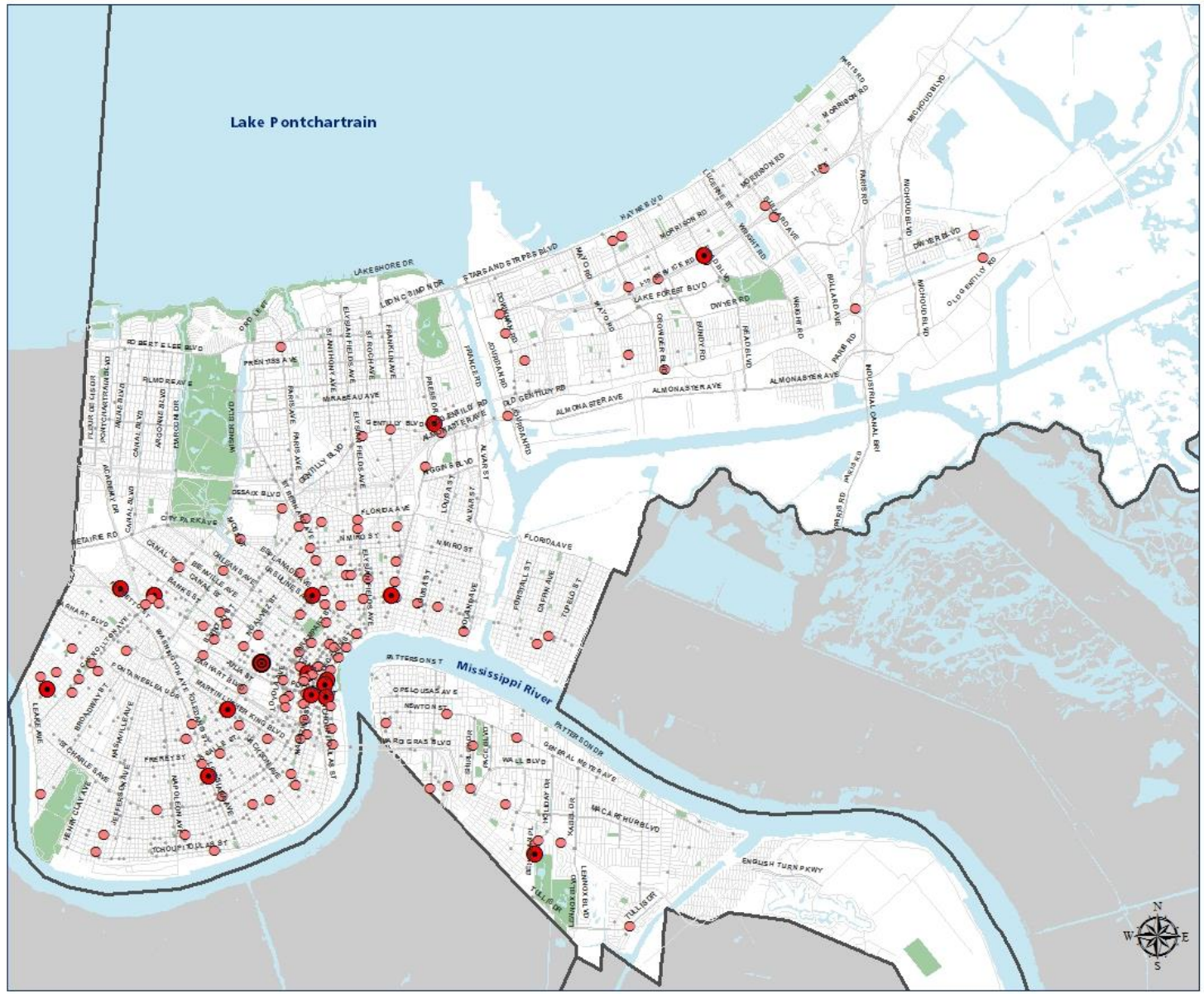
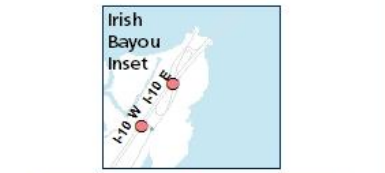
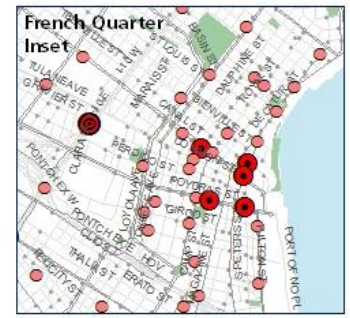
gcr







Intersections with Fatalities

Street 1	Street 2
CLAIBORNE AVE	GRAVIER ST
READ BLVD	I-10 WON RAMP
ESPLANADE AVE	CLAIBORNE AVE
MARTIN LUTHER KING BLVD	CLAIBORNE AVE
LOUISIANA AVE	SARATOGA ST
TULANE AVE	GAYOSO ST
DUMAINE ST	CLAIBORNE AVE
TULANE AVE	CARROLLTON AVE
I-10 E	RIDGEWAY EXIT
ALCEE FORTIER BLVD	SAISON DR
MEMORIAL PARK DR	BEHRMAN PL
GENERAL DE GAULLE DR	SHIRLEY DR
PORT ST	ST CLAUDE AVE
CLOUET ST	ST CLAUDE AVE
DAUPHINE ST	BIENVILLE ST
ST CLAUDE AVE	CHARTRES ST
DEARMAS ST	TECHE ST
GENERAL DE GAULLE DR	RUE PARC FONTAINE
GENERAL DE GAULLE DR	SANDRA DR
CHEF MENTEUR HWY	CHEF MENTEUR EXIT
MORRISON RD	DOWNMAN RD
DOWNMAN EXIT	I-10 E
I-10 SERVICE RD	CROWDER BLVD
FLORIDA AVE	ELYSIAN FIELDS AVE
BROAD ST	DUELS ST
PINES BLVD	DOWNMAN RD
BENSON ST	DINKINS ST
I-10 W	I-10 WON RAMP
BEHRMAN PL	HOLIDAY DR
SIMMONS DR	ALMONASTER AVE
CLAIBORNE AVE	FERN ST
ST CHARLES AVE	TOLEDANO ST
SPRUCE ST	CARROLLTON AVE
HICKORY ST	JOLIET ST
CHESTNUT ST	BROADWAY ST
COLAPISSA ST	LOWERLINE ST
BROAD ST OVERPASS	HOWARD AVE
PERDIDO ST	LOYOLA AVE
VALENCE ST	ST CHARLES AVE
LOUISIANA AVE	LA SALLE ST
WASHINGTON AVE	LA SALLE ST
AMELIA ST	TOHOUPITOULAS ST
TERPSICHORE ST	ORETHA CASTLE HALEY BLVD
JULIA ST	OKEEFE AVE
1ST ST	MAGAZINE ST

*** Note: 4 KSIs unable to be located were omitted from analysis.

Pedestrian Crashes 2008-2012
Fatalities/Severe Injuries (KSI) Crashes

Data Sources: City of New Orleans, RPC, DOTD, NOPD
Date: April 14, 2014

0 1.5 3 6

New Orleans Pedestrian Crash Analysis

Legend

Injury Code Total

- 0-4.99 (698)
- 5-35.99 (119)
- 36-71.99 (128)
- 72 and above (16)

DOTD
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[redacted]

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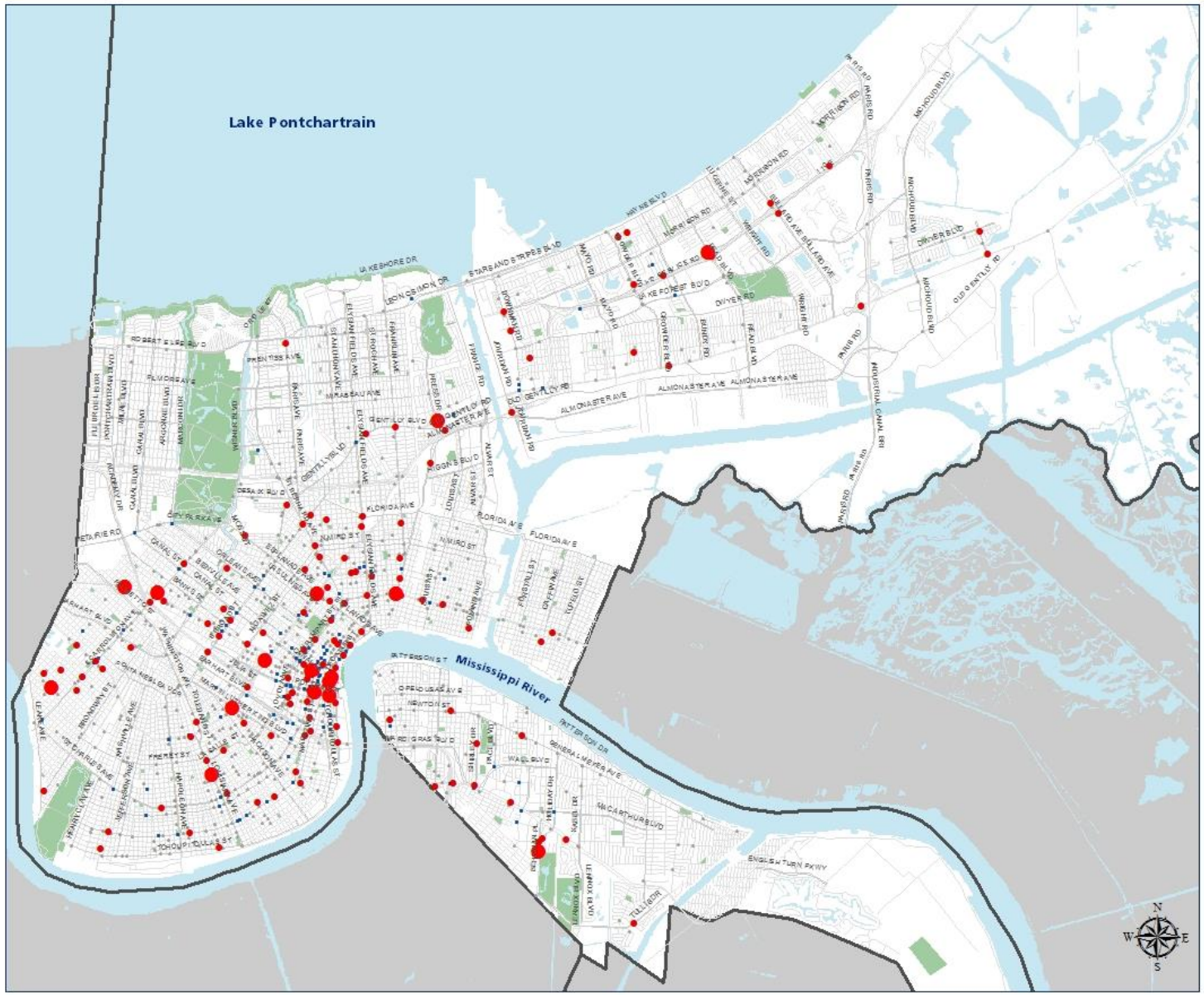
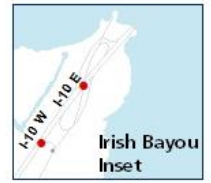
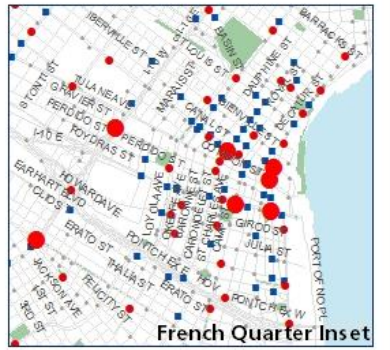


Code/Severity	Weight
A/Fatality	36
B/Severe injury	36
C/Non-severe injury	4
D/Possible injury	1
E/No injury	0.04





Top 20 Intersections (Injury Code Total)

Rank	Street 1	Street 2	# Crashes	V.3 Score
1	CLAIBORNE AVE	GRAVIER ST	4	109
2	POYDRAS ST	CAMP ST	11	105
3	IBERVILLE ST	PETERS ST	11	87.12
4	CANAL ST	CARONDELET ST	10	87.08
5	PETERS ST	POYDRAS ST	8	83.04
6	ESPLANADE AVE	CLAIBORNE AVE	7	80.12
7	READ BLVD	I-10 W ON RAMP	4	80
8	CARROLLTON AVE	ULLOA ST	4	77
9	MARTIN LUTHER KING BLVD	CLAIBORNE AVE	3	72.04
10	AIRLINE HWY	MONROE ST	2	72
11	CANAL ST	PETERS ST	2	72
12	ST CLAUDE AVE	FRANKLIN AVE	2	72
13	BEHRMAN PL	MEMORIAL PARK DR	2	72
14	PRESS DR	CHEF MENTEUR HWY	2	72
15	WILLOW ST	CAMBRONNE ST	2	72
16	LOUISIANA AVE	SARATOGA ST	2	72
17	CLAIBORNE AVE	LEONIDAS ST	7	53.04
18	PETERS ST	CONTI ST	6	48.08
19	ST CLAUDE AVE	ELYSIAN FIELDS AVE	6	47
20	GRAVIER ST	BROAD AVE	4	45

*** Note: 4 KSIs unable to be located were omitted from analysis

Pedestrian Crashes 2008-2012
Intersection Crash Severity Scores

Data Sources: City of New Orleans, RPC, DOTD, NOPD
Date: April 14, 2014

0 1.25 2.5 5 Miles

New Orleans Pedestrian Crash Analysis

Legend

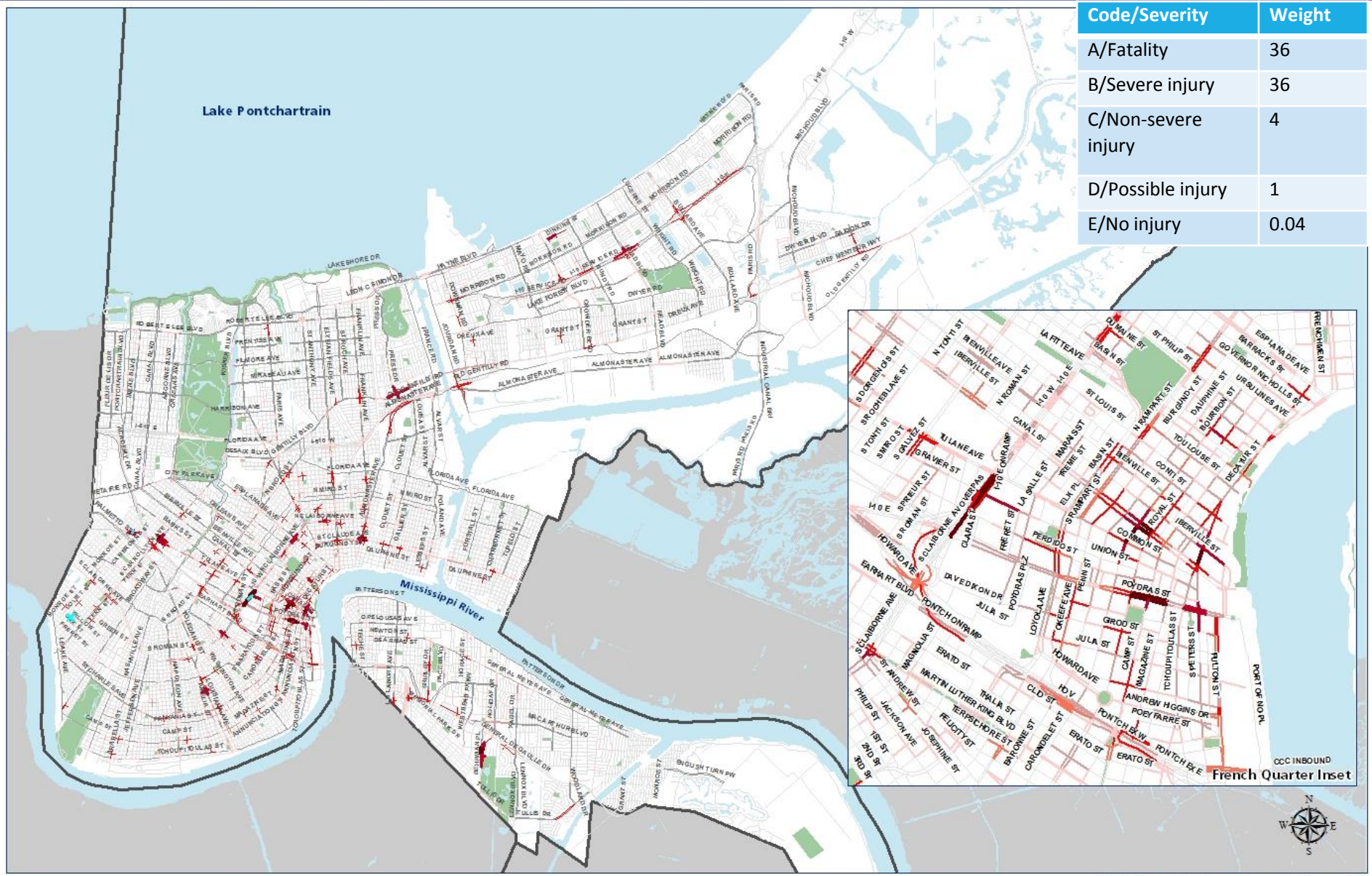
Injury Code Total

- 0.0 - 4.1
- 4.2 - 16.1
- 16.2 - 35.9
- 36.0 - 71.9
- 72.0 - 107.0
- 108.0 - 159.1

Weighting System for Crash Severity

Fatality = 36
Severe/Incapacitating Injury = 36
Non-severe injury = 4
Apparent/Possible Injury = 1
No injury/Property damage = 0.04

Code/Severity	Weight
A/Fatality	36
B/Severe injury	36
C/Non-severe injury	4
D/Possible injury	1
E/No injury	0.04



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Pedestrian Crashes 2008-2012
Street Segment Crash Severity Scores

*** Note: 4 KSIs unable to be located were omitted from analysis.

Data Sources: City of New Orleans, RPC, DOTD, NOPD

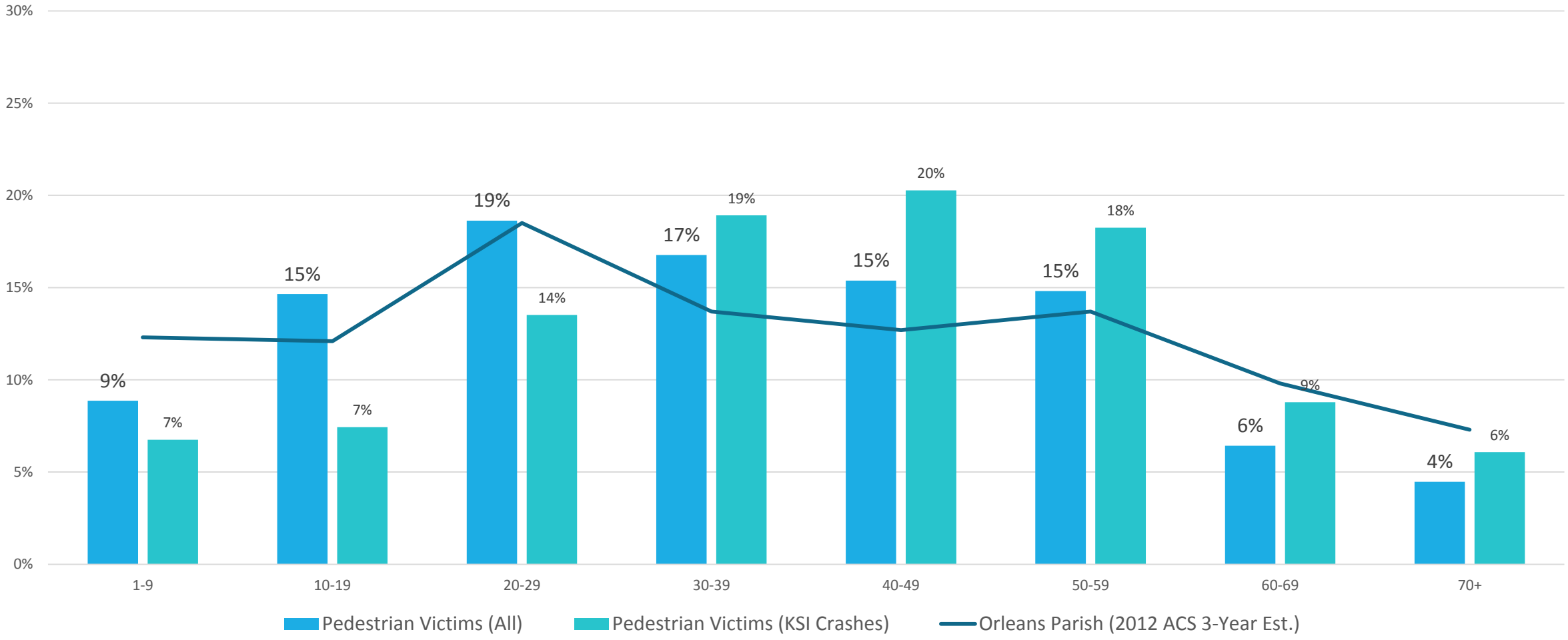
Date: April 14, 2014

0 1.25 2.5 5 Miles

Top Twenty Ranked Intersections

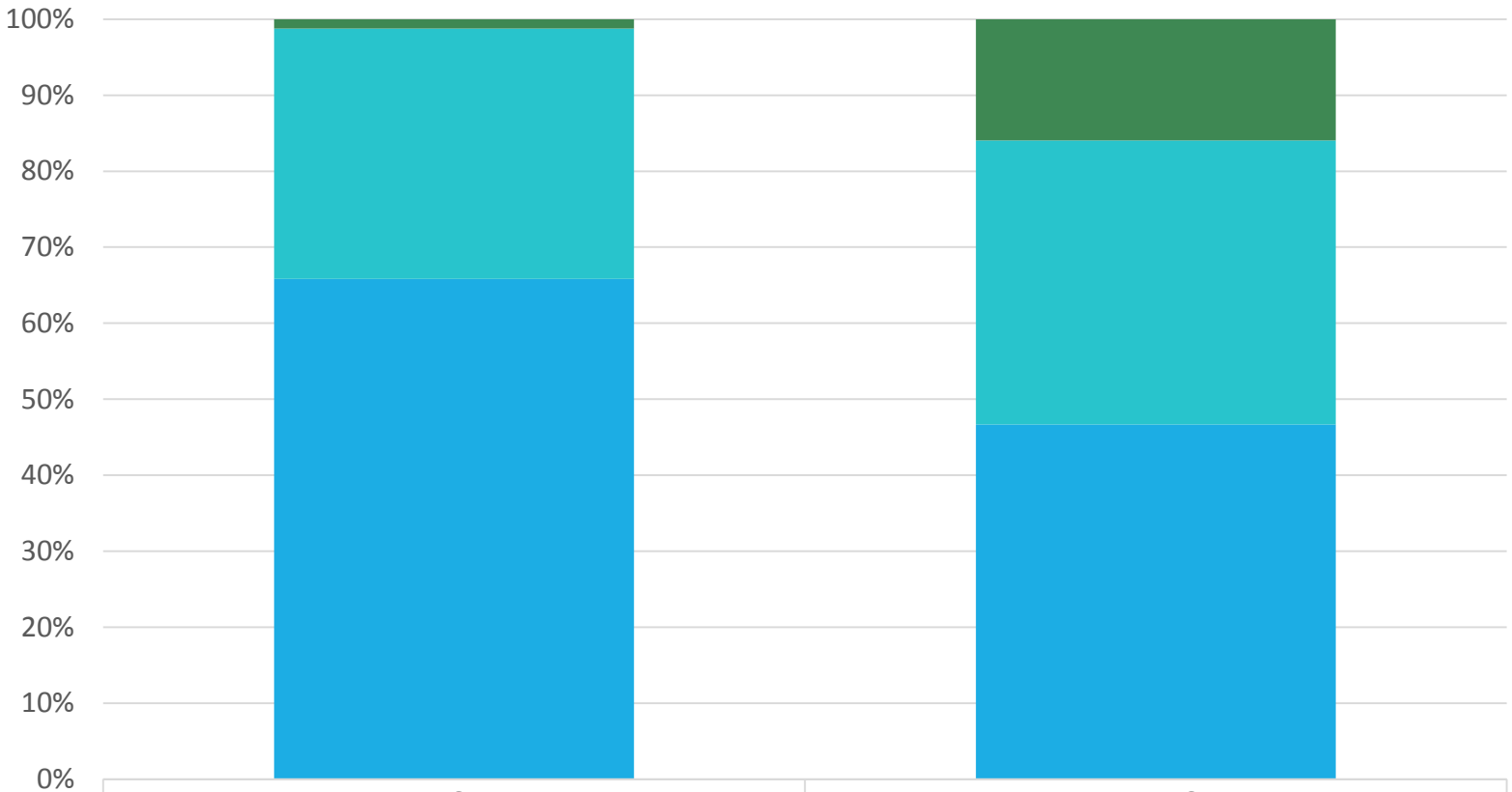
Rank	Street	Cross Street	Signal	Transit Stop	# Crashes	# KSI	Score
1	S. Claiborne Ave (US90)	Gravier St	Yes	No	4	3	109
2	Poydras St	Camp St	Yes	Yes	11	2	105
3	N. Peters St	Iberville St	No	Yes	11	2	87.12
4	Canal St	Carondelet St/Bourbon St	Yes	Yes	10	2	87.08
5	S. Peters St	Poydras St	Yes	Yes	8	2	83.04
6	Esplanade Ave	N. Claiborne Ave	Yes	Yes	7	2	80.12
7	Read Blvd	I-10 W Onramp	Yes	Yes	4	2	80
8	Carrollton Ave	Ulloa St	Yes	Yes	4	2	77
9	S. Claiborne Ave (US90)	Martin Luther King Blvd	Yes	Yes	3	2	72.04
10	Airline Dr (US61)	Monroe St	Yes	Yes	2	2	72
10	Canal St	N./S. Peters St	Yes	Yes	2	2	72
10	St Claude Ave (LA46)	Franklin Ave	Yes	Yes	2	2	72
10	Behrman Pl (LA428)	Memorial Park Dr	No	Yes	2	2	72
10	Press Dr	Chef Menteur Hwy (US 90)	Yes	Yes	2	2	72
10	Willow St	Cambronne St	No	Yes	2	2	72
10	Louisiana Ave	S. Saratoga St	Yes	Yes	2	2	72
17	S. Claiborne Ave (US90)	Leonidas St	Yes	Yes	7	1	53.04
18	N. Peters St	Conti St	No	Yes	6	1	48.08
19	St Claude Ave (LA46)	Elysian Fields Ave (LA46)	Yes	Yes	6	1	47
20	Gravier St	S. Broad St	No	Yes	4	1	45

Crash Victim Profile - Age



n=1,229, 83%

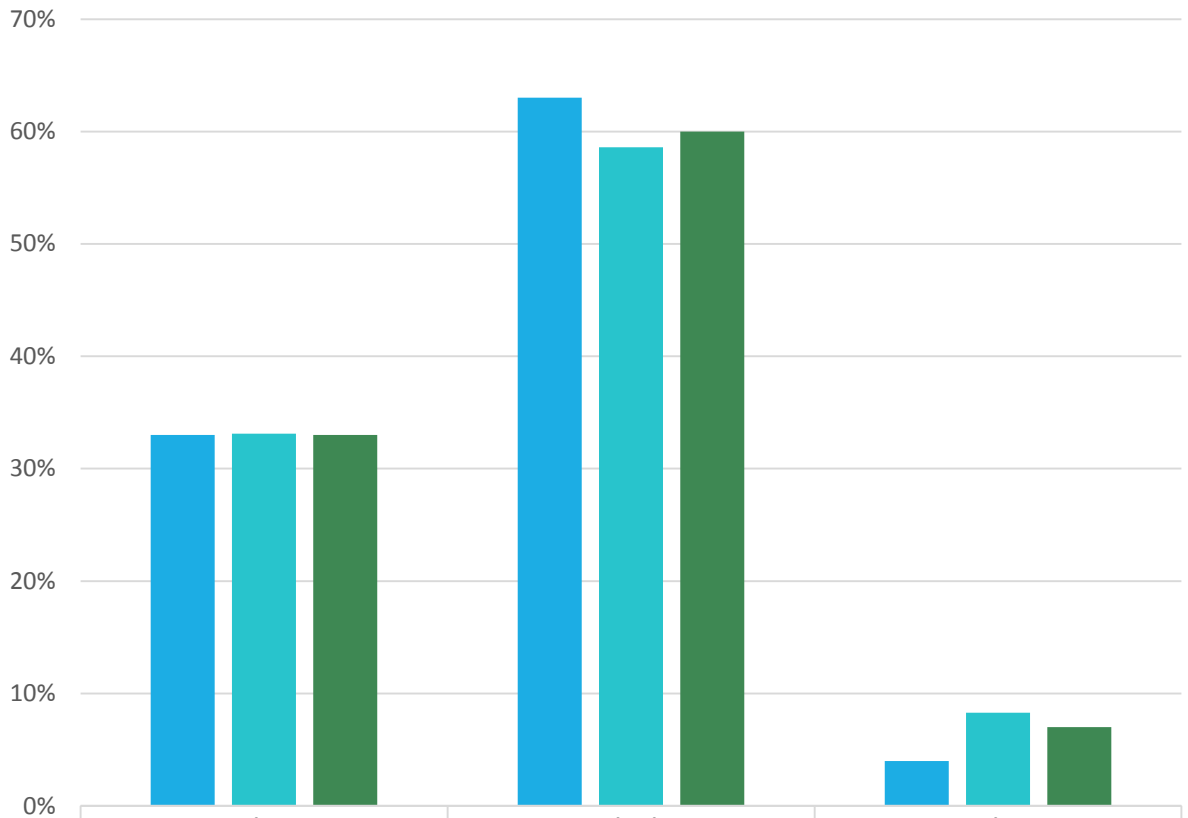
Crash Victim Profile - Gender



	KSI	Non-KSI
Unknown	2	212
Female	53	496
Male	106	620

n=1489, 100%

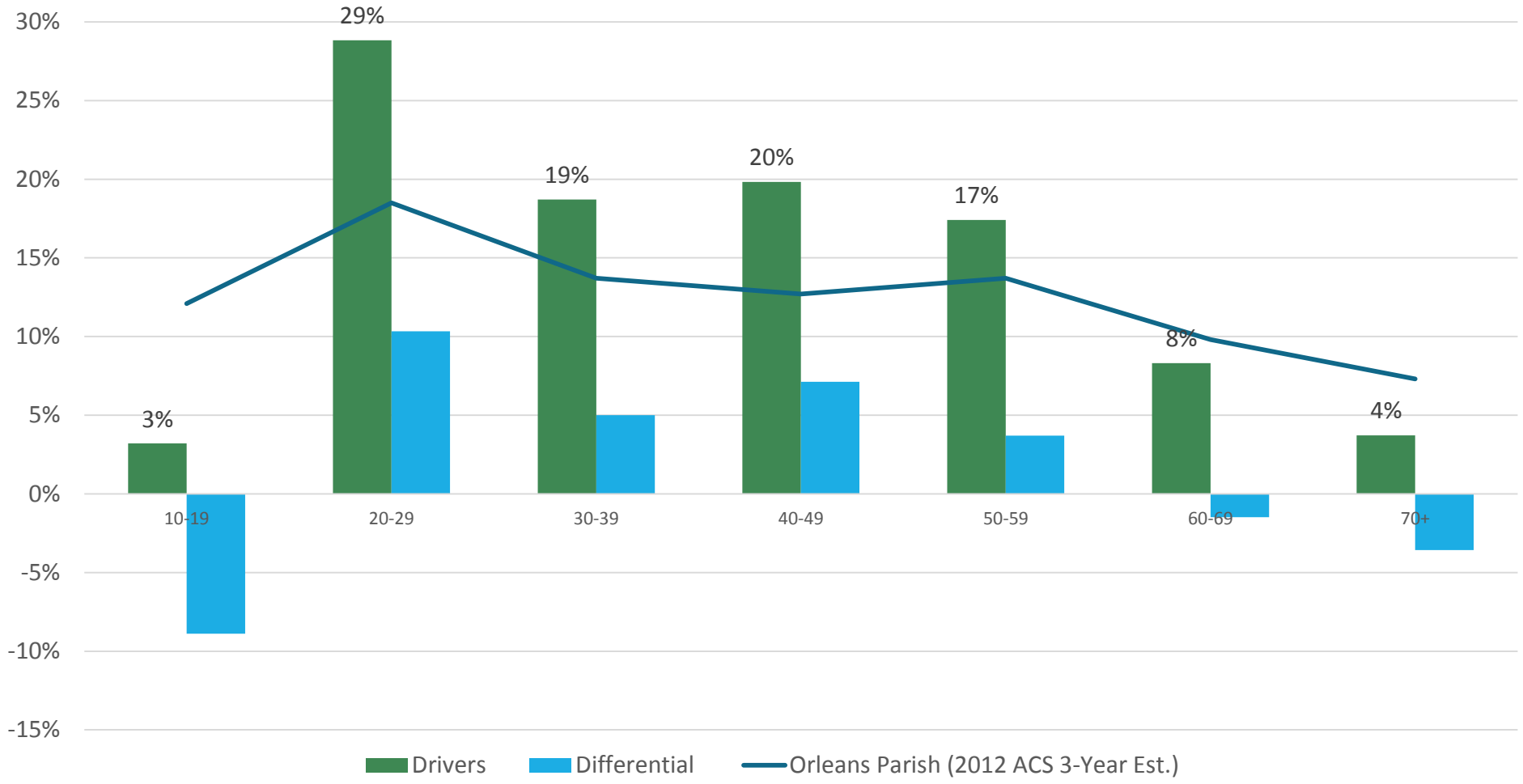
Victim Profile – Race



	White	Black	Other
All	33.0%	63.0%	4.0%
KSI	33.1%	58.6%	8.3%
Orleans Population	33.0%	60.0%	7.0%

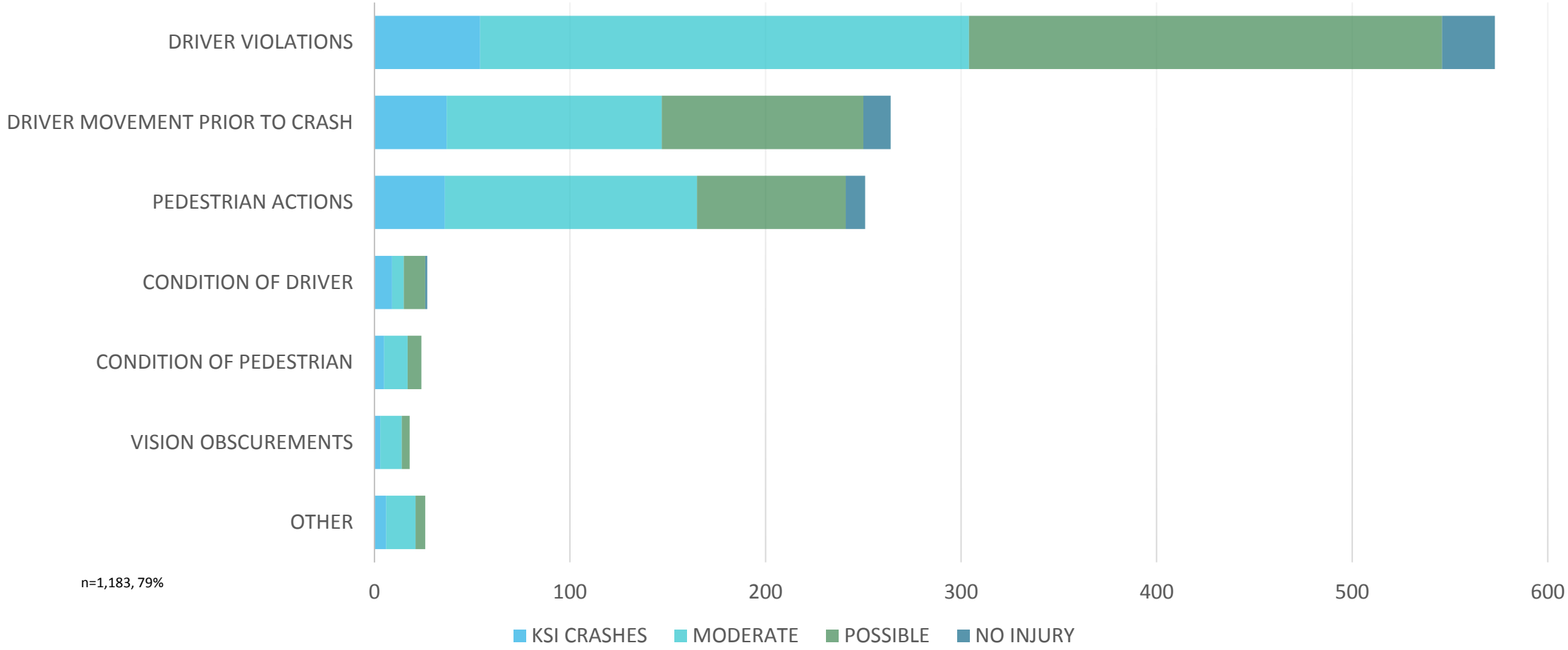
n=1,254, 84%

Driver Profile – Age

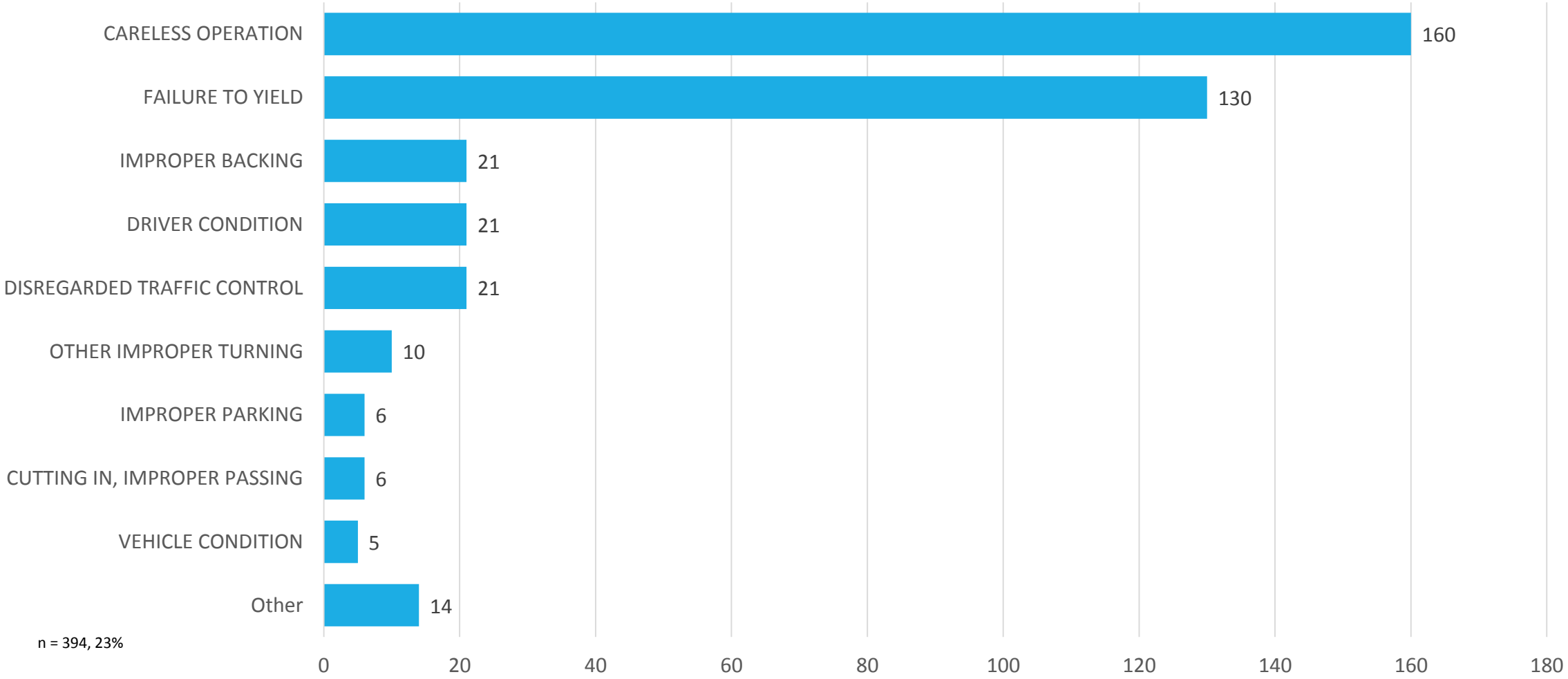


n=1155, 70%

Primary Contributing Factors

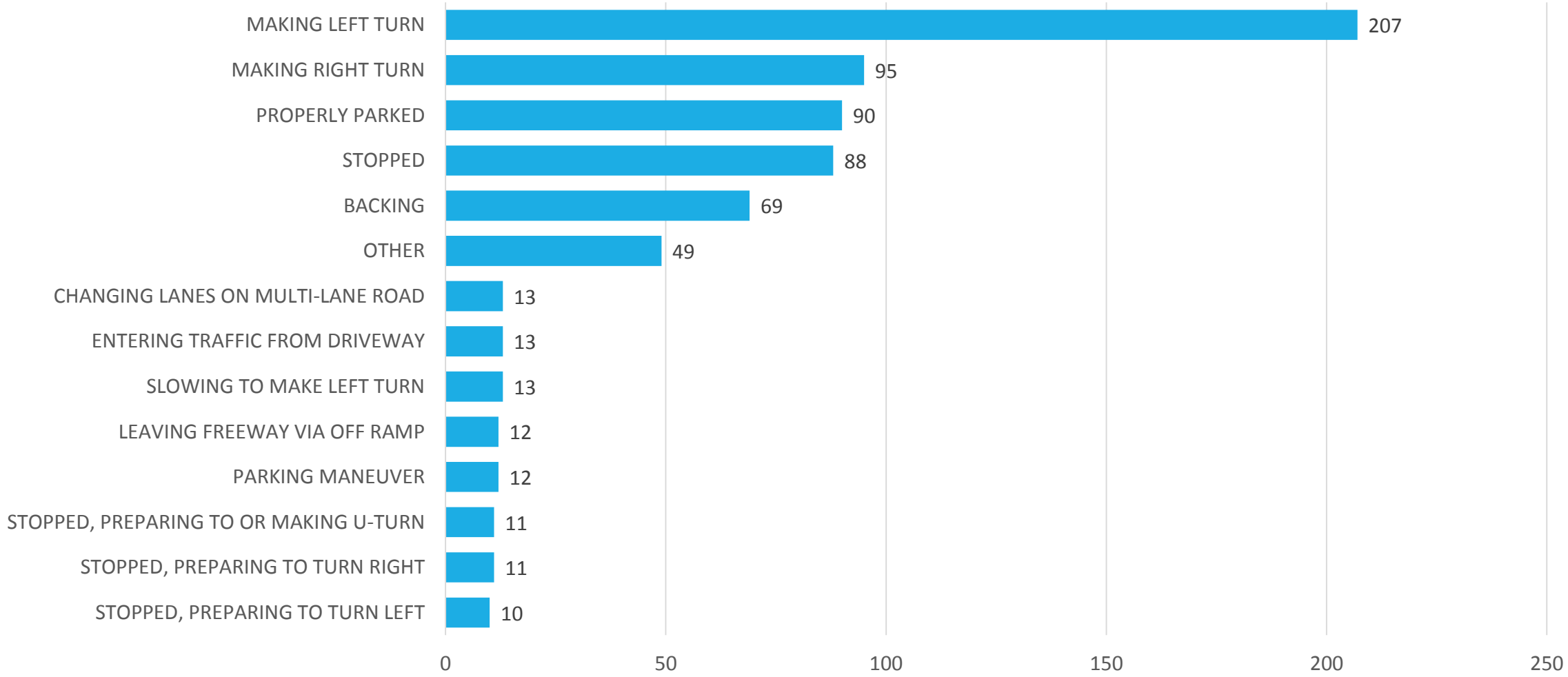


Driver Violations



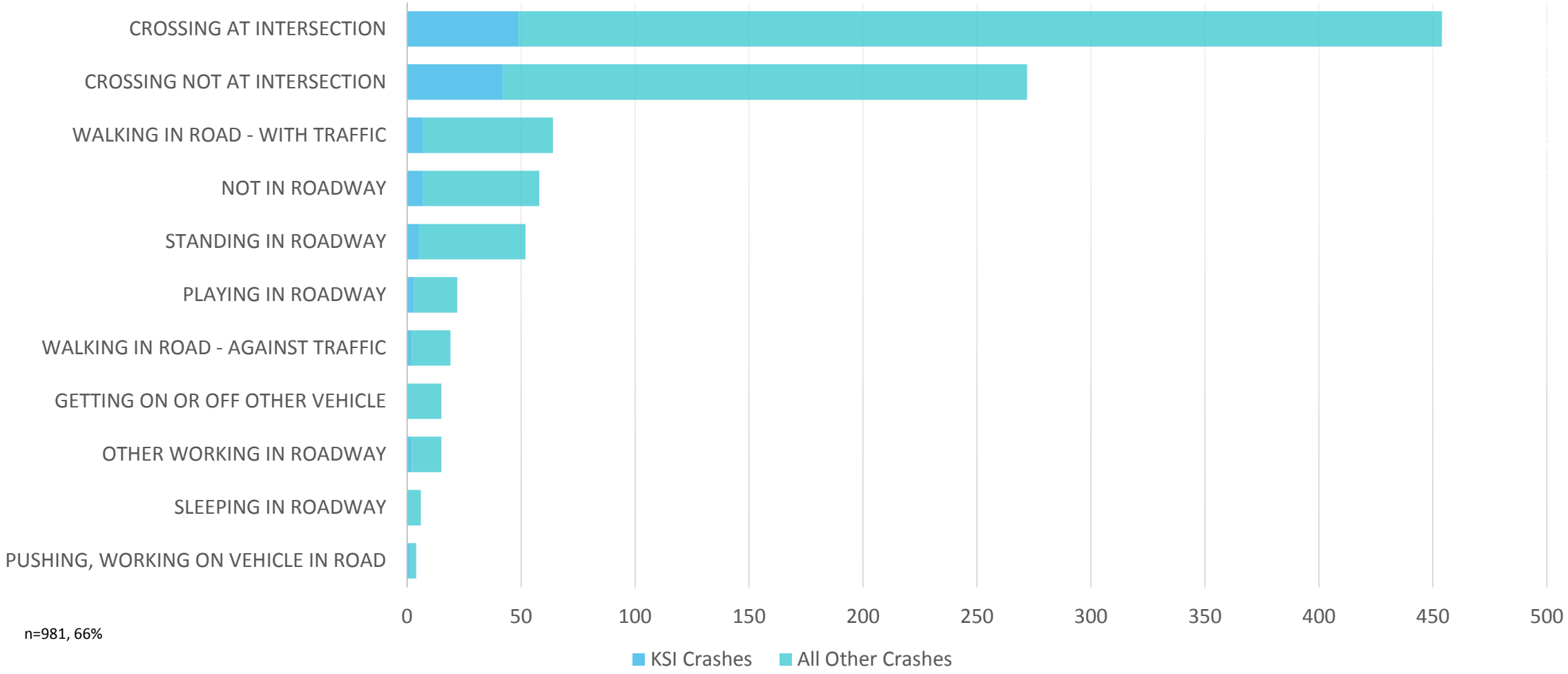
n = 394, 23%

Driver Movement Prior to Crash



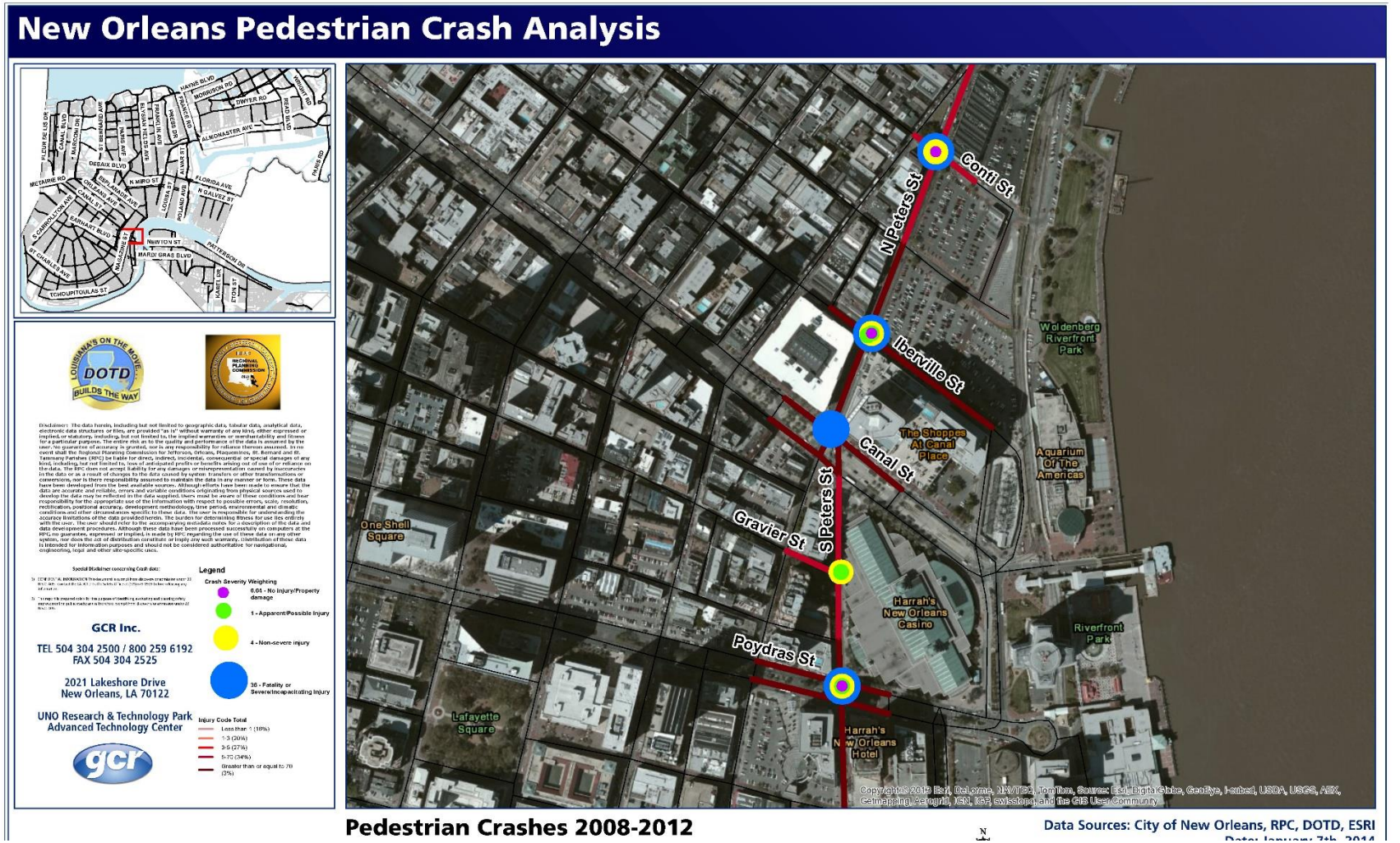
n=795, 48%

Pedestrian Action Prior to Crash



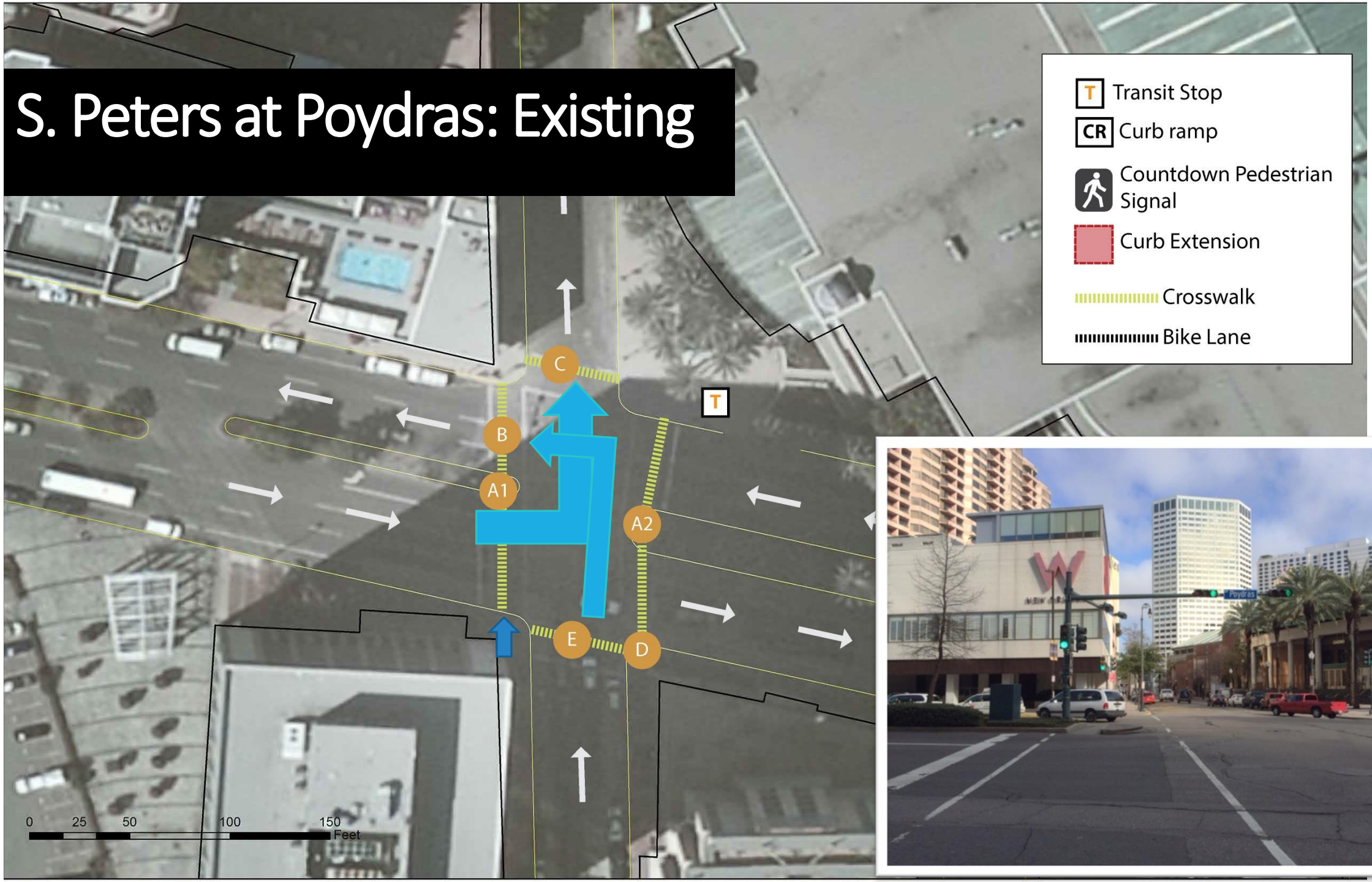
n=981, 66%

Peters Corridor



- 18 crashes involving 21 pedestrians
- 6 severe injuries
- 11 left turns
- Several failures to yield

S. Peters at Poydras: Existing



Countermeasure recommendations

Short term: Low-cost, easy-to-implement

- Change signal timing/phases
- Pedestrian countdown signals
- Signage
- Striping (crosswalks, stop lines)
- Minor concrete work
- Parking restrictions

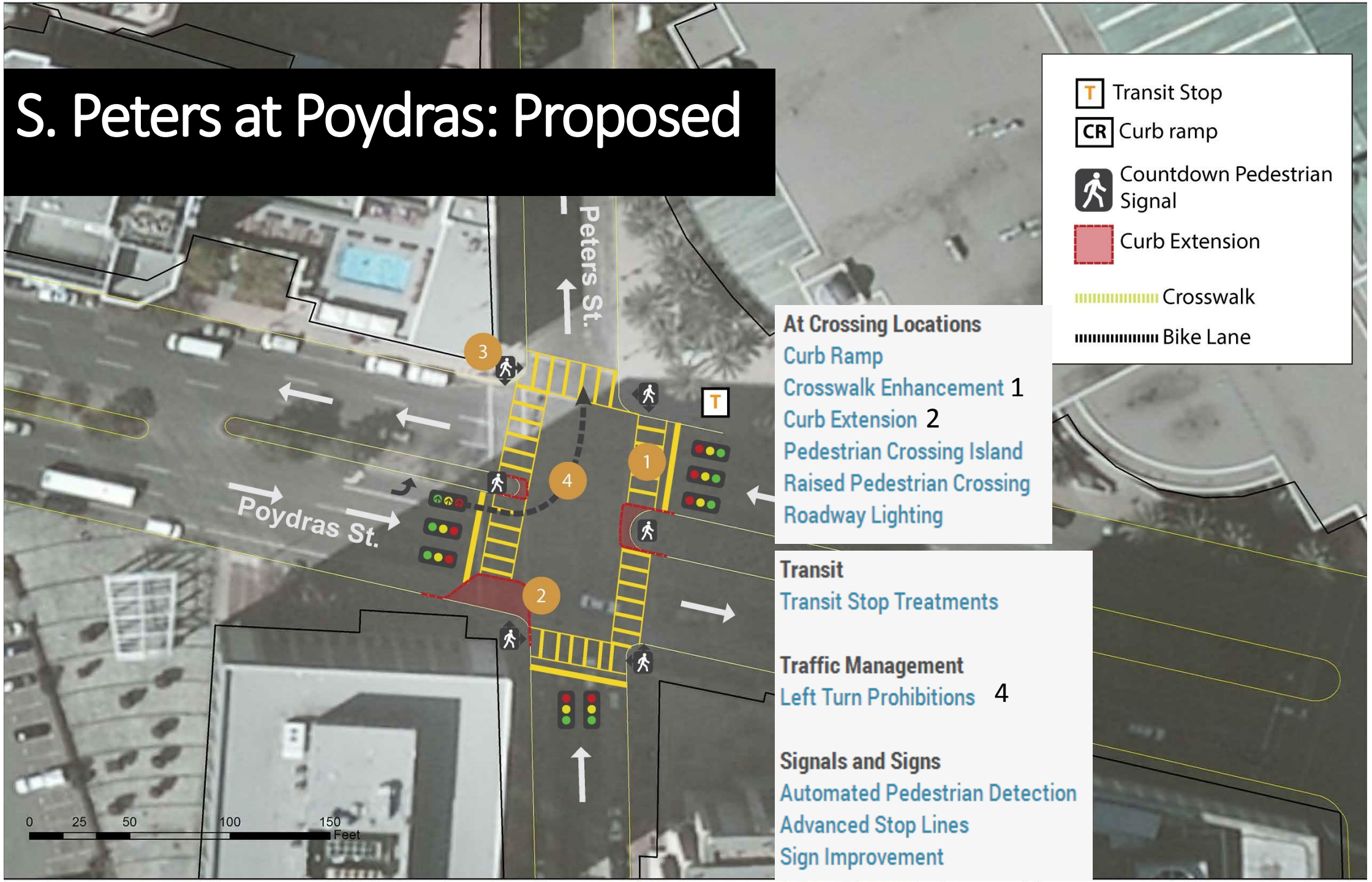
Long-term: Higher cost, longer timeline

- Sidewalk construction, repair, expansion
- Radius reduction
- Curb extensions, raised crossings, refuges
- Lighting
- Road diets (lane narrowing/reduction)
- Access management (driveway narrowing/closure)
- Traffic calming

PEDSAFE

Pedestrian Safety Guide and Countermeasure Selection System, by FHWA
www.pedbikesafe.org

S. Peters at Poydras: Proposed



T Transit Stop

CR Curb ramp

Countdown Pedestrian Signal

Curb Extension

Crosswalk

Bike Lane

At Crossing Locations

Curb Ramp

Crosswalk Enhancement 1

Curb Extension 2

Pedestrian Crossing Island

Raised Pedestrian Crossing

Roadway Lighting

Transit

Transit Stop Treatments

Traffic Management

Left Turn Prohibitions 4

Signals and Signs

Automated Pedestrian Detection

Advanced Stop Lines

Sign Improvement

Next steps

- Implement $1.2M pedestrian countdown signals and high visibility crosswalks (funded; Local Road Safety Program)
- Complete Stage “0” Intersection Improvements Safety Study for Top 20 Intersections
  - Additional crash analyses
  - Collection of traffic counts
  - Intersection capacity and safety analyses
  - Cost estimates
- Develop, fund, and implement education and enforcement strategies
- Coordinate work with new Pedestrian and Bicycle Safety Advisory Committee (created by New Orleans City Council)

Thank you!

Jennifer Ruley, PE

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Advisor to City of New Orleans

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LPHI

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